

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Facilitating the Communications of Earth Stations)	IB Docket No. 18-315
in Motion with Non-Geostationary Orbit Space)	
Stations)	

COMMENTS OF KEPLER COMMUNICATIONS INC.

Kepler Communications Inc. (“Kepler”) respectfully submits these comments in response to the Federal Communications Commission’s (the “Commission”) Notice of Proposed Rulemaking (“NPRM”) to facilitate communications of earth stations in motion (“ESIMs”) with non-geostationary satellite orbit, fixed-satellite service (“NGSO FSS”) systems.¹ As explained in the ESIM Coalition Comments,² by virtue of the ESIM streamlining efforts and the increased spectrum available, the Commission will unlock the benefits of NGSO-provisioned connectivity as they relate to ESIMs.³

In addition to the above, Kepler believes that further clarification may be required on how various systems should operate their ESIMs, particularly as it relates to Self-Monitoring and Network Control requirements.⁴ Kepler sees a growing market in supplying connectivity

¹ *Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, Notice of Proposed Rulemaking, IB Dkt No. 18-315, FCC 18-160 (rel. Nov. 16, 2018) (“NPRM”).

² See Comments of the ESIM Coalition, IB Dkt No. 18-315, FCC 18-160, (filed Feb. 11, 2019) (“ESIM Coalition Comments”).

³ ESIM Coalition Comments, Sections I, II and III. Kepler supports the ESIM Coalition Comments, and hereby incorporates by reference their document.

⁴ See NPRM at ¶ 19 (suggesting Sections 25.228(a), (b) and (c) codify the two-degree spacing requirements for ESIMs communicating with GSO FSS satellite networks, but they also contain

solutions to operations that do not require bent-pipe architecture services. As such, a satellite network need not be controlled in “real-time” from a NCMC, but may instead rely either on Artificial Intelligence (“AI”) or predetermined rules in order to mitigate interference as it relates to aggregate EIRP.⁵ While this does not preclude the requirement for a NCMC, it should be clarified that operations without bent-pipe architecture may implement alternate safety measures, and could use the satellite itself as an “equivalent facility”, that “Monitors [...] each ESIM in its network”. In this example given, the extent of the network to which the NCMC has control are those ESIMs that are connected to the particular satellite acting on its own accord as an NCMC. Given this possibility, Kepler is of the opinion that further clarification may be required to support the extent to which an “equivalent facility” lies within the same purview as a NCMC.

Kepler believes that by allowing the use of 10.7 – 11.7 GHz by ESIMs, the Commission would enable the growth of hybrid connectivity systems, or an “Aggregator Model” network solution. Such systems would facilitate an effective use of spectrum and promote innovation by allowing user terminals to operate over both Fixed/Mobile services as well as Satellite services, while being agnostic to the end user. As such, Kepler fully supports the notion of extending the range of Ku available for use by NGSO ESIMs.

Kepler thanks the Commission for initiating this proceeding and appreciates the Commission’s efforts to adopt a framework in an effort to enable equitable and diversified NGSO-provisioned ESIM connectivity.

self-monitoring and network monitoring and control (“NCMC”) requirements for NGSO operations).

⁵ *See Id.*, Section 25.228(c).

Respectfully submitted,

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